



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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SPECIFICATION

Part No.	:	AA.108.301F21
Product Name	:	Titan GPS/GALILEO Antenna AA.108
Features	:	Adhesive Mount Covert stylish design Wide band input voltage IP-67 Waterproof 3M RG-174 GT5(F) Grey Connector Cable and connector customizable RoHS Compliant



1. Introduction

Our AA.108 Titan adhesive mount external antenna is ideal for robust, covert installations where durability and small size is paramount. It is ideal for telematics and M2M applications for commercial vehicle installations for fleet management etc.

Titan antennas are also widely used for consumer GPS/GALILEO devices when extra sensitivity is required, e.g. navigation devices and speed trap detectors.

The AA.108 is first tier automotive approved IP67 antenna, this part AA.108.301F21 (with GT5 connector) is listed in the global automotive IMDS databases, it has gone through full PPAP design, reliability and quality audits, including audits at the production facility.

2. Electrical Specifications

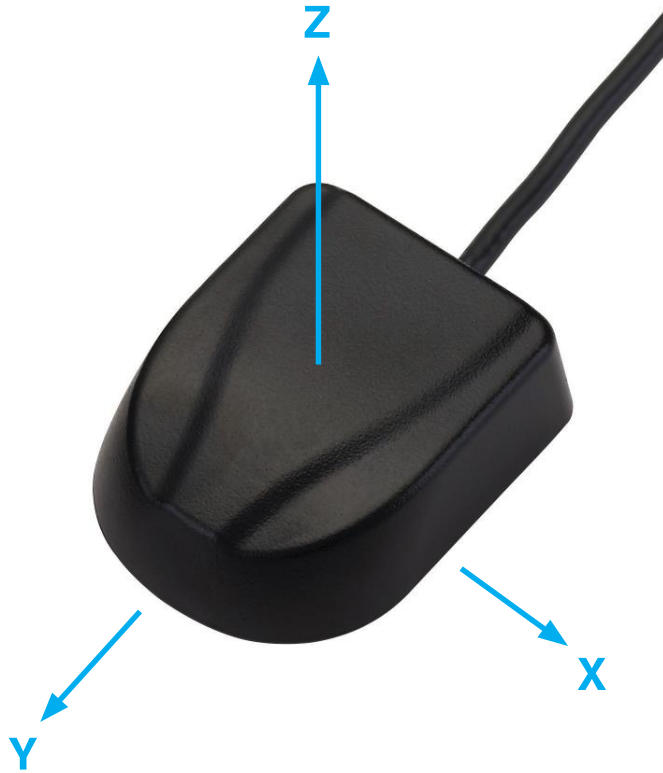
Ceramic Patch	
Outline Dimension	25*25*4mm
Ground Size	25*25*4mm
Center Frequency	1575.42±3MHz
Bandwidth	10MHz
VSWR	1.92 Max
Axial ratio	3dB Typ.
Gain @ Zenith	2dBic Typ.
Impedance	50Ω
Polarization	RHCP

LNA						
Frequency	1575.42MHz					
Impedance	50Ω					
VSWR	1.92 Max.					
DC Power Input	1.8V	2.5V	2.7V	3.3V	5V	12V
Gain	21.8dB	28dB	29dB	31dB		
Noise Figure	1.4dB	1.38dB	1.3dB			
Power Consumption	4.5mA	6.6mA	7mA			
Band Attenuation	40dB @fo±50MHz					
Operating temp	-40℃ ~ +85℃					
Storage Temp	-40℃ ~ +90℃					

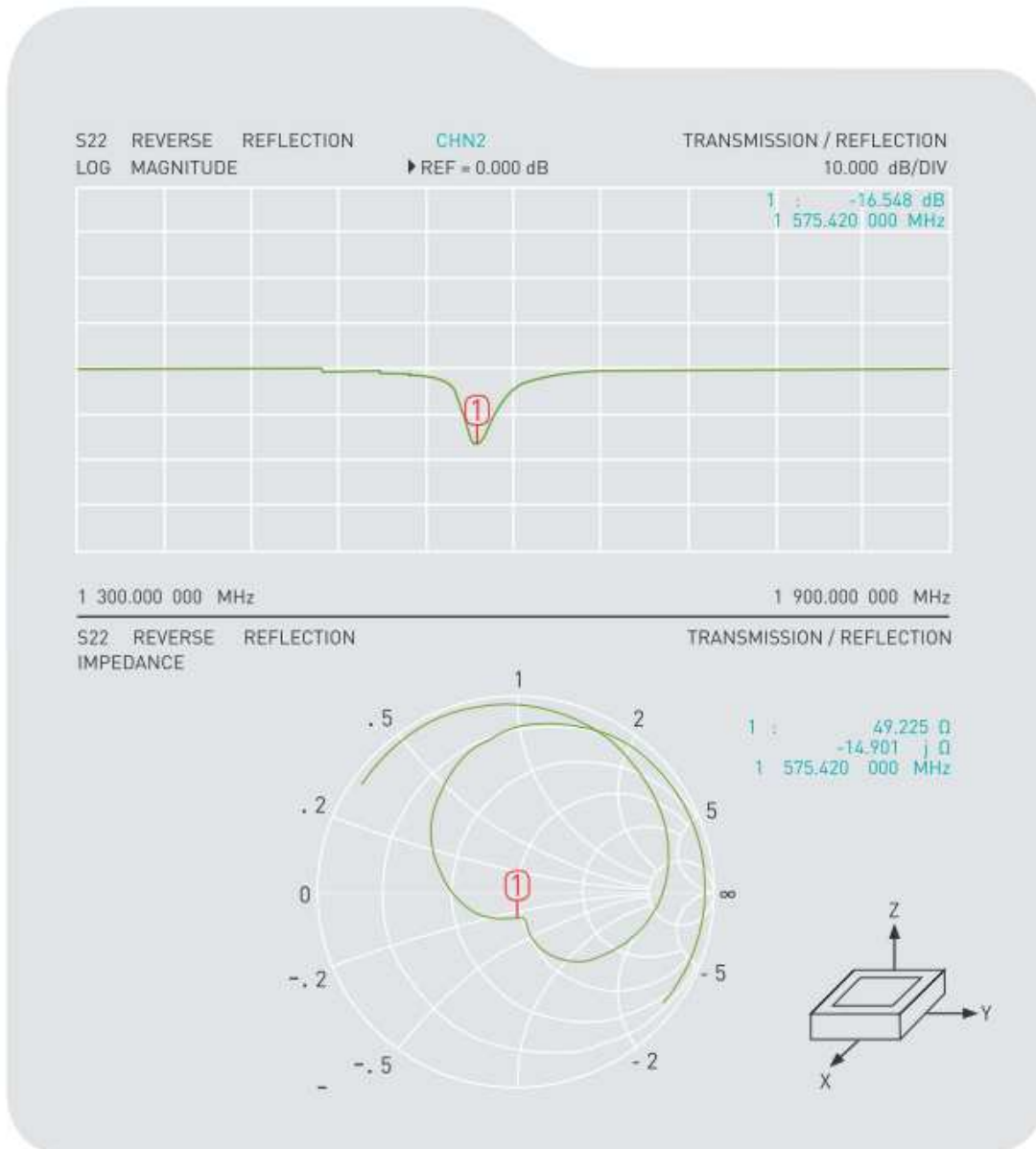
*Formula = Patch Antenna Average Gain + LNA typical gain – RG174 cable loss @1.2dB per meter = Gain at connector

Gain at the Connector - Patch Gain 2dB + LNA Gain 30dB – Cable loss of 1.2dB per metre (@3m = 3.6dB) = 28.4dB approx.

3. Ceramic Antenna Radiation Pattern (with housing)

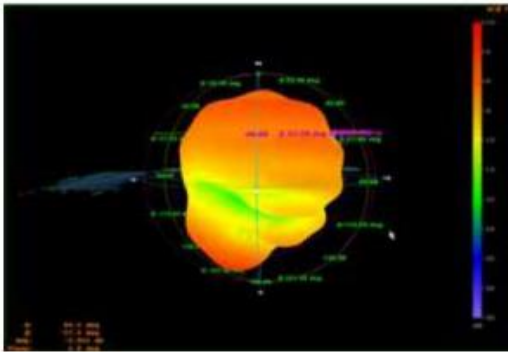


3.1. Ceramic Antenna S11 (with housing)

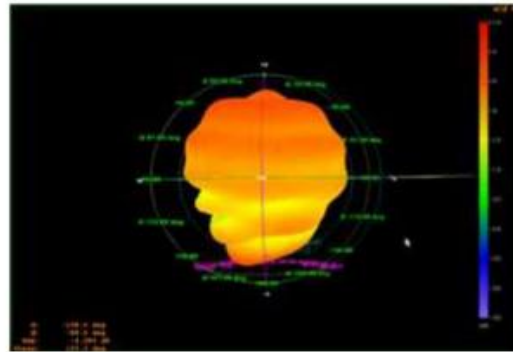


3.2. XZ Plane & YZ Plane

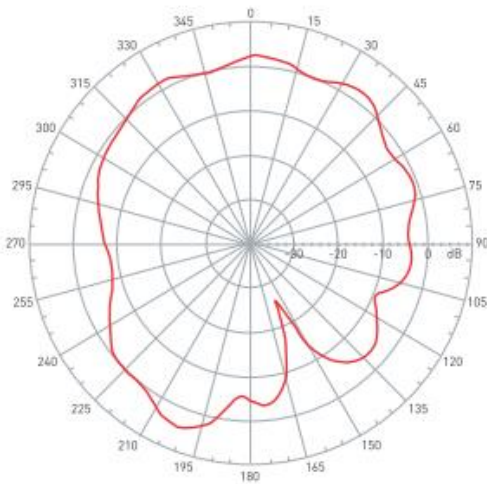
XZ Plane



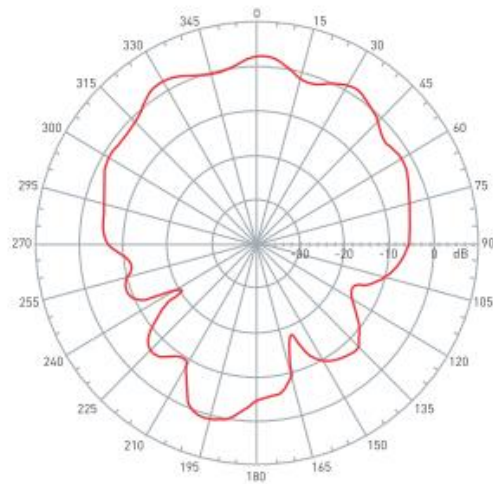
YZ Plane



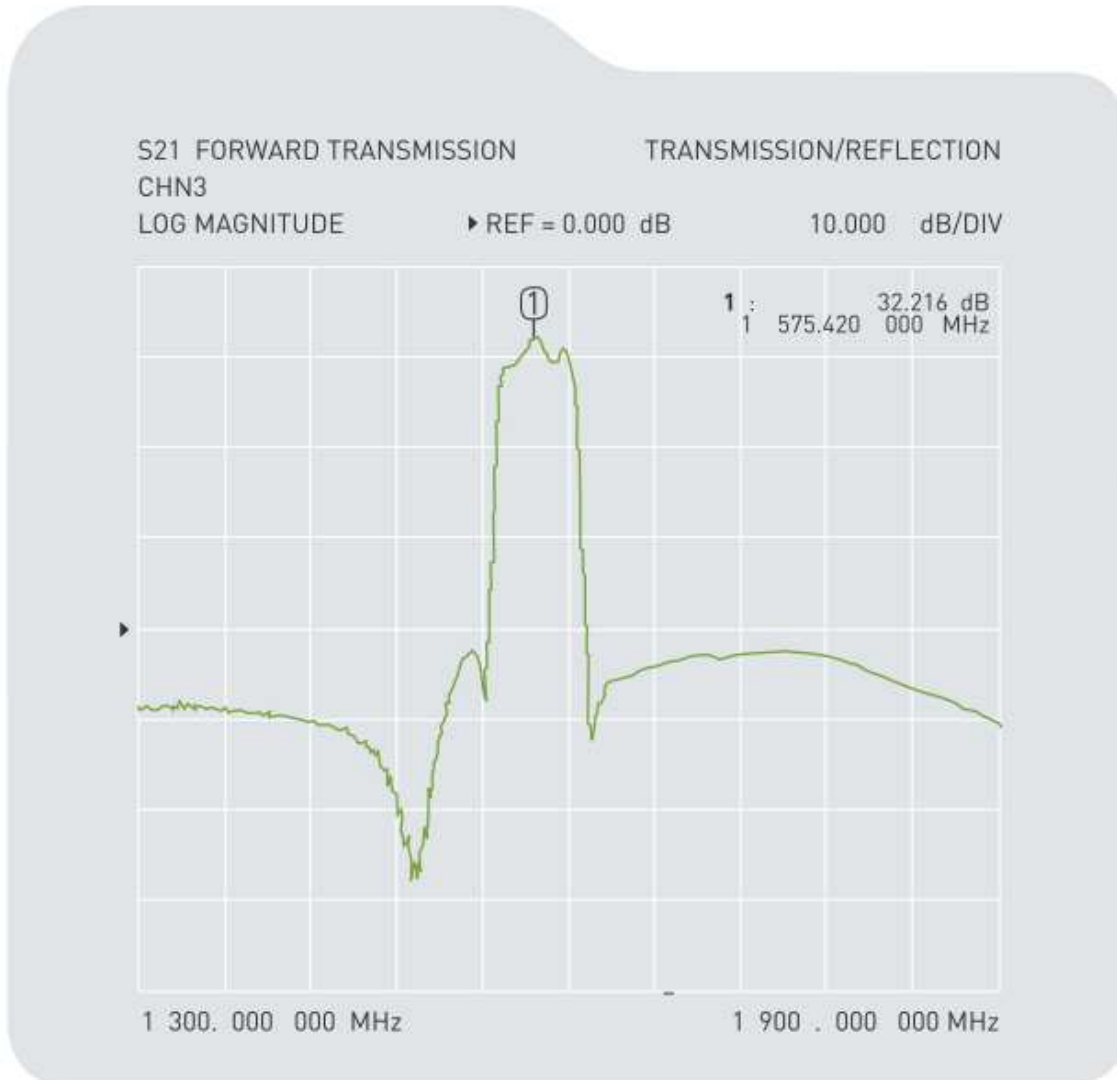
Far-field amplitude of goasial
1583 06-5-8.nsi



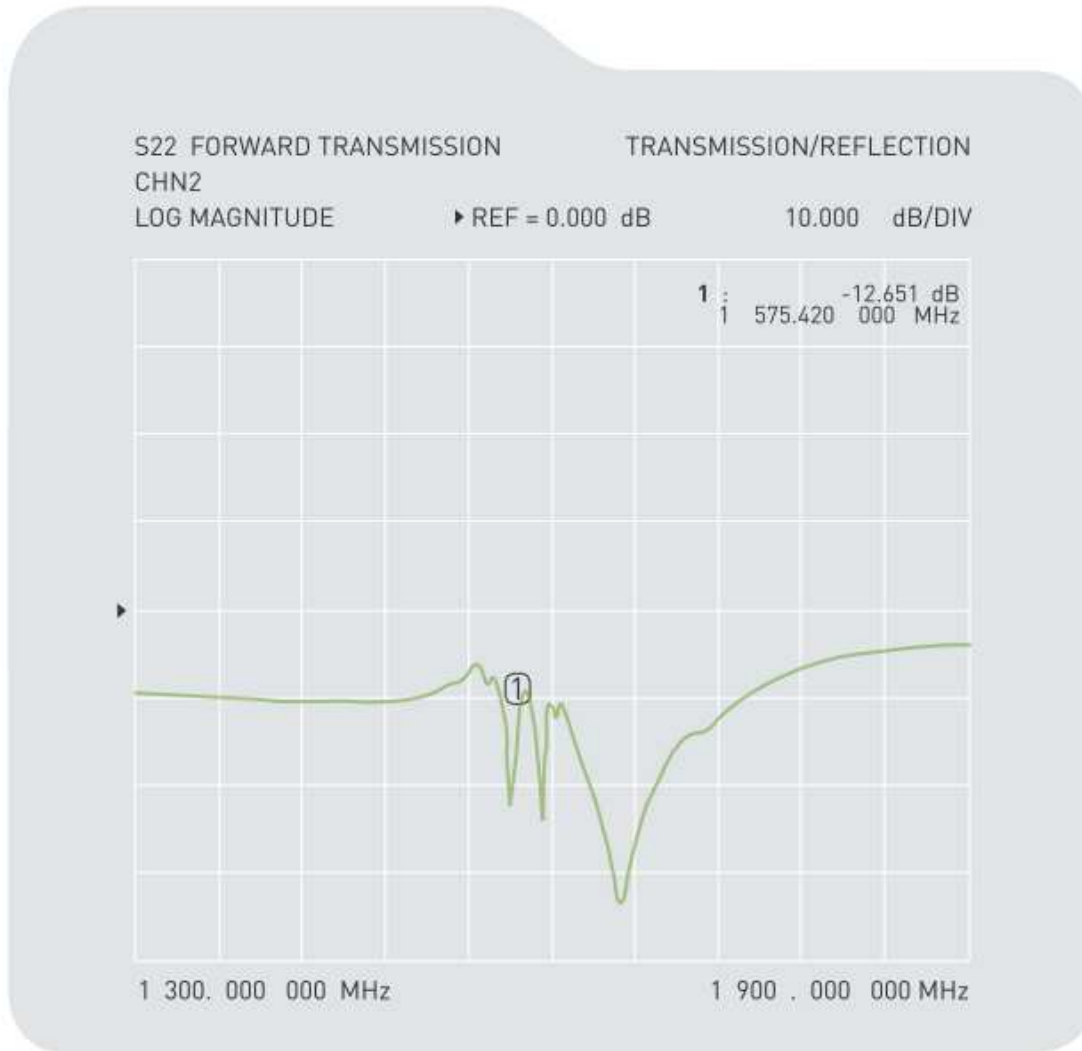
Far-field amplitude of goasial
1583 06-5-8.nsi



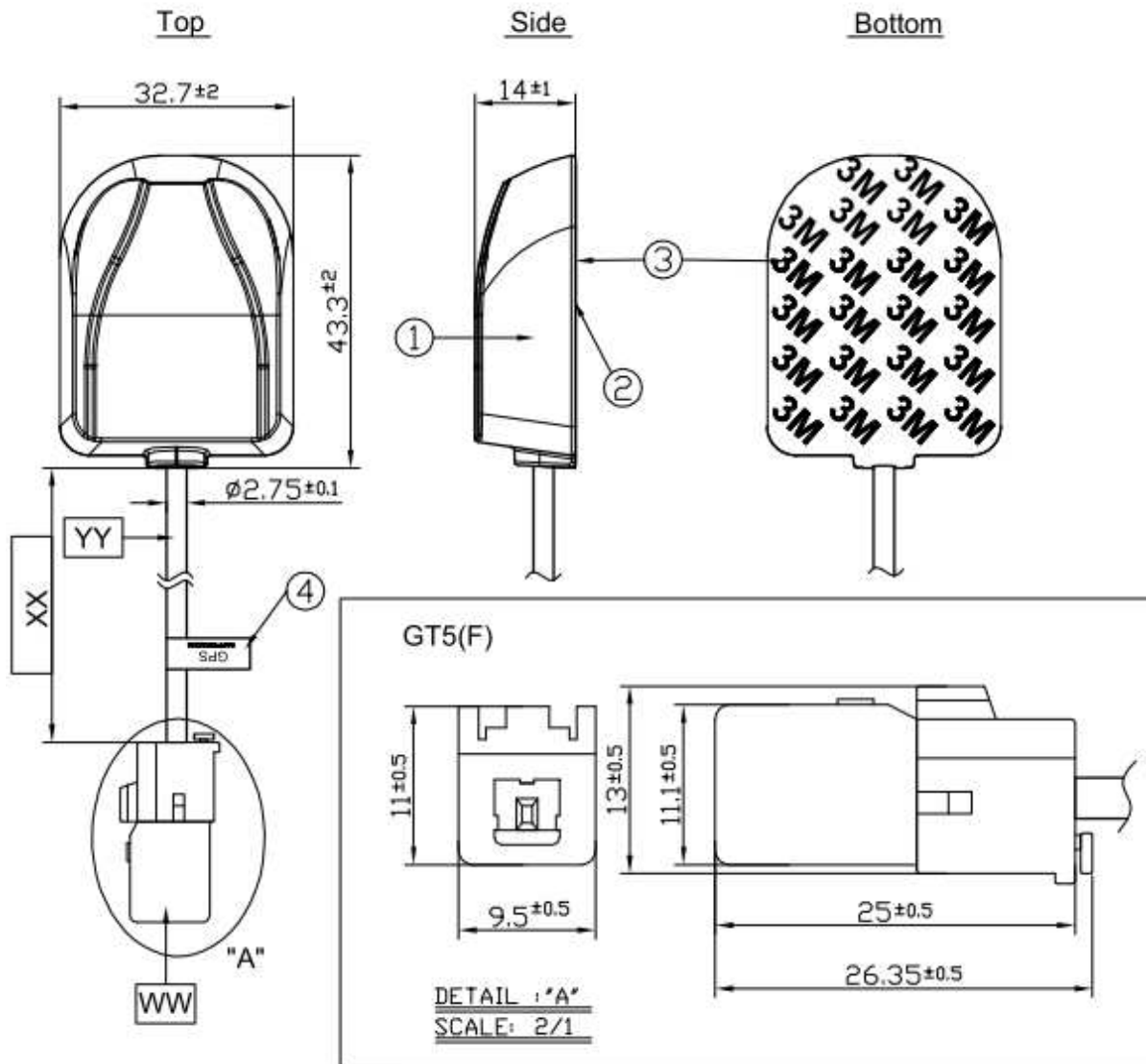
3.3. LNA gain



3.4. LNA S22



4. Drawing

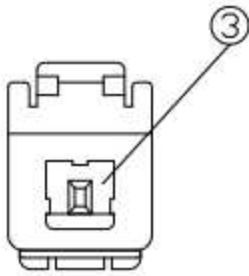


	Name	Material	Finish	QTY
1	GPS Antenna Housing Top	PC	Black	1
2	GPS Antenna Housing Bottom	PC	Black	1
3	Double Sided Adhesive	3M 4612	White Liner	1
4	GPS Label	Coate Paper	Oranger	1

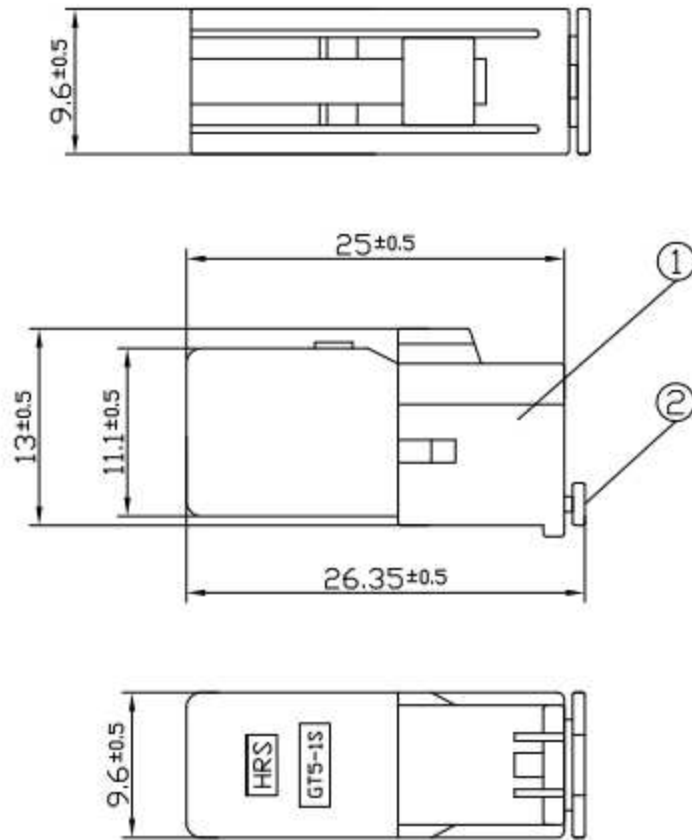
	Name	Spec	Finish	QTY
WW	Connector Type	GT5(F)	Gray	1
XX	Cable Length	3000±30mm	Black	1
YY	Cable Type	RG174	Black	1

4.1. Connector

Front View



Side View

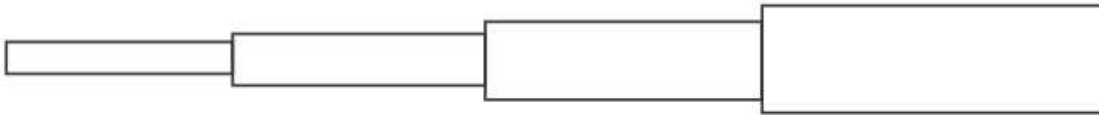
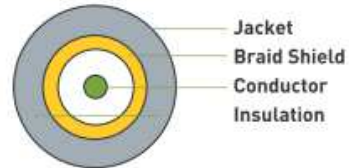


5. RG-174 Cable Specification

RG-174 Coaxial Cable

Cable conforming to 2002/95/CE (RoHS)

Structure and Dimensions



Conductor

- Material - Bare Copper
- AWG 26
- Stranding -
7/0.165 ± 0.008mm

Insulation

- Material - XL-PE
- Min. Avg. Thickness 0.45mm
- Diameter - 1.55 ± 0.05mm
- NO - 1C

Braid Shield

- Material - Tinned Copper
- Size - 16*5/0/10 ± 0.008mm

PVC Jacket

- Material - PVC According to 200/53/EC - Half Matt-Low Toxic
- Min. Avg. Thickness - 0.38mm
- Diameter - 2.80 ± 0.15mm
- Colour - UL813

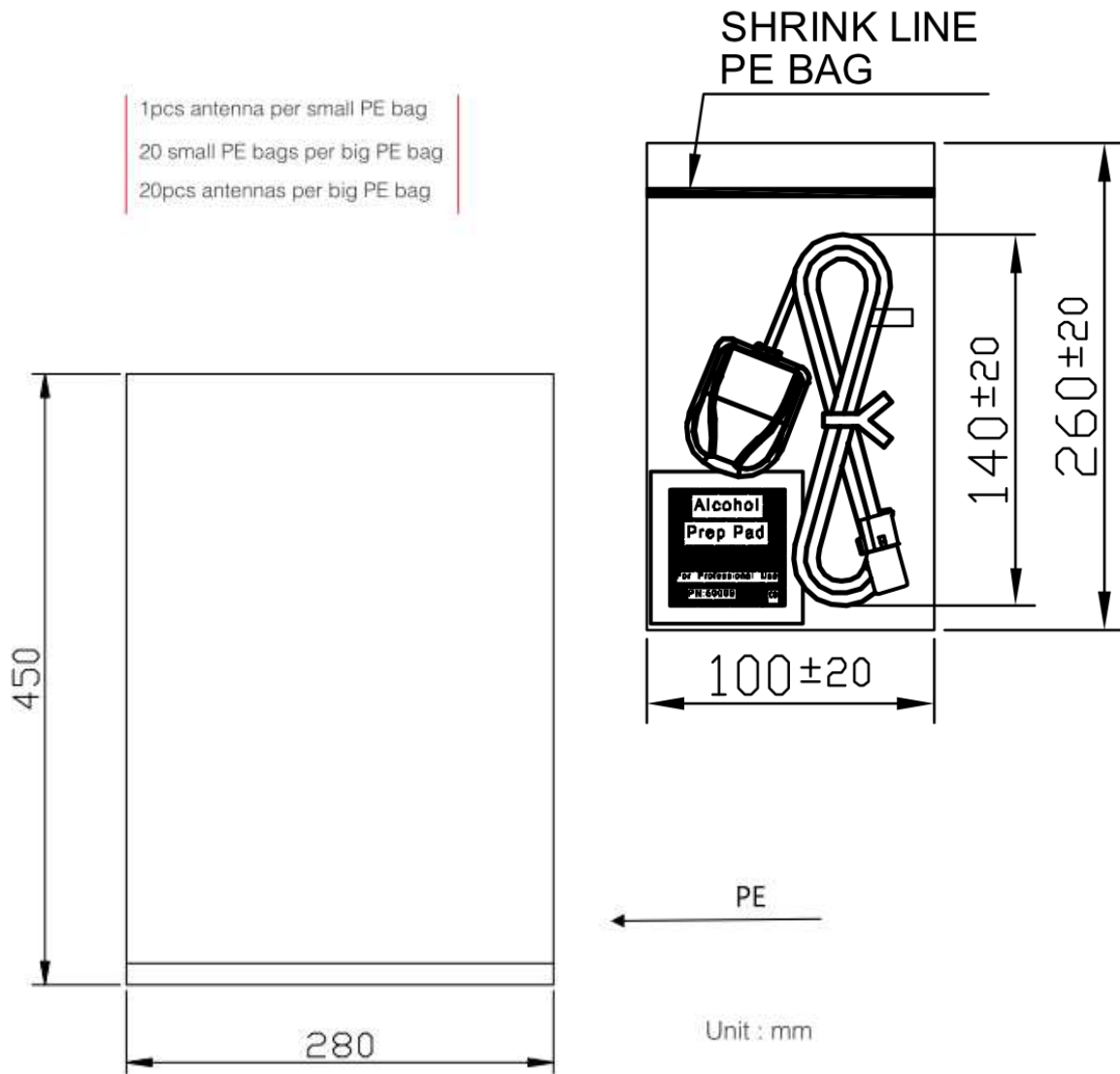
Electrical & Physical Specification

1	Temperature rating	80°C
2	Voltage	30V
3	Capacitance nominal (1KHz)	30.8 pF/ft
4	Conductor Resistance at 20°C	MAX 26AWG: 148.94Ω/km
5	Impedance	50 ± 5 Ω

RG-174 cable attenuation (dB/100mm)

GHz	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6
RG-174	67	110	127	153	168	183	207	229	252	272	291	311

9. Packaging



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